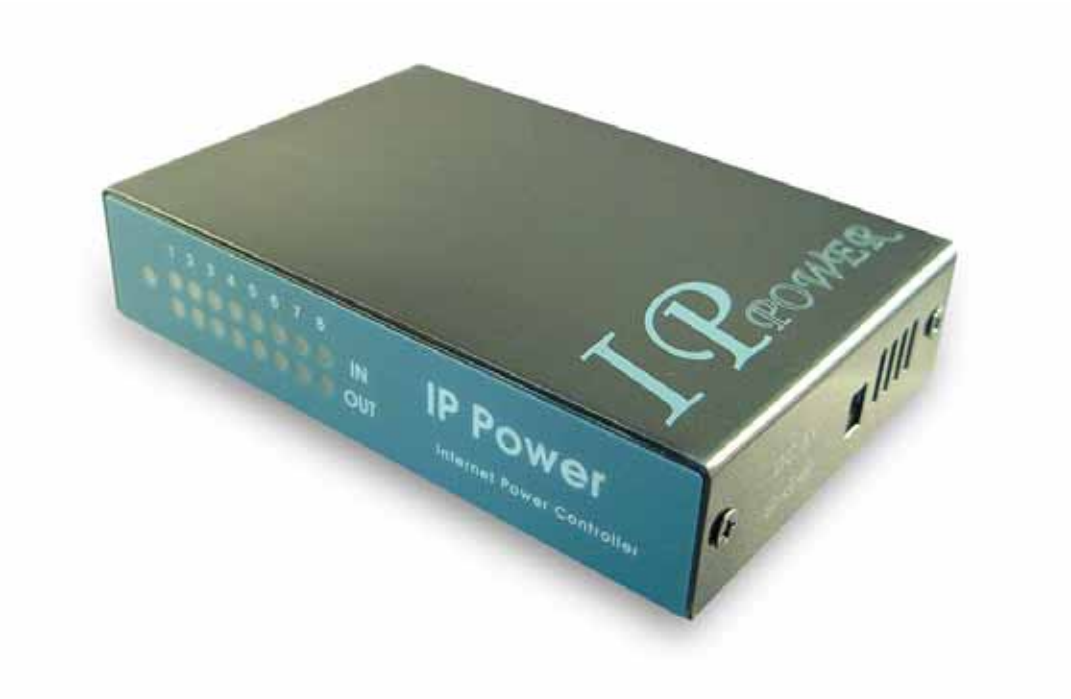
IP Power 9212

User Manual

USER MANUAL



IP POWER 9212
Version: X.X
2005.01

Warning: any changes to this equipment without permission may cause damages to your equipment! This equipment has been proved to can be prevented from the influence of harmful electronic jamming in normal business use condition.

IMPORTANT NOTICE

1. IP POWER 9212 is deigned to be used in-door, we have no responsibility for the possible damage in out-door use especially in the rain。.
2. Please use the power adaptor provided by the dealer, we have no responsibility for the possible damage in using other adaptors.
4. Do not use IP POWER 9212 in strong shaking condition
5. Please contact the dealer If IP POWER 9212 works improperly.

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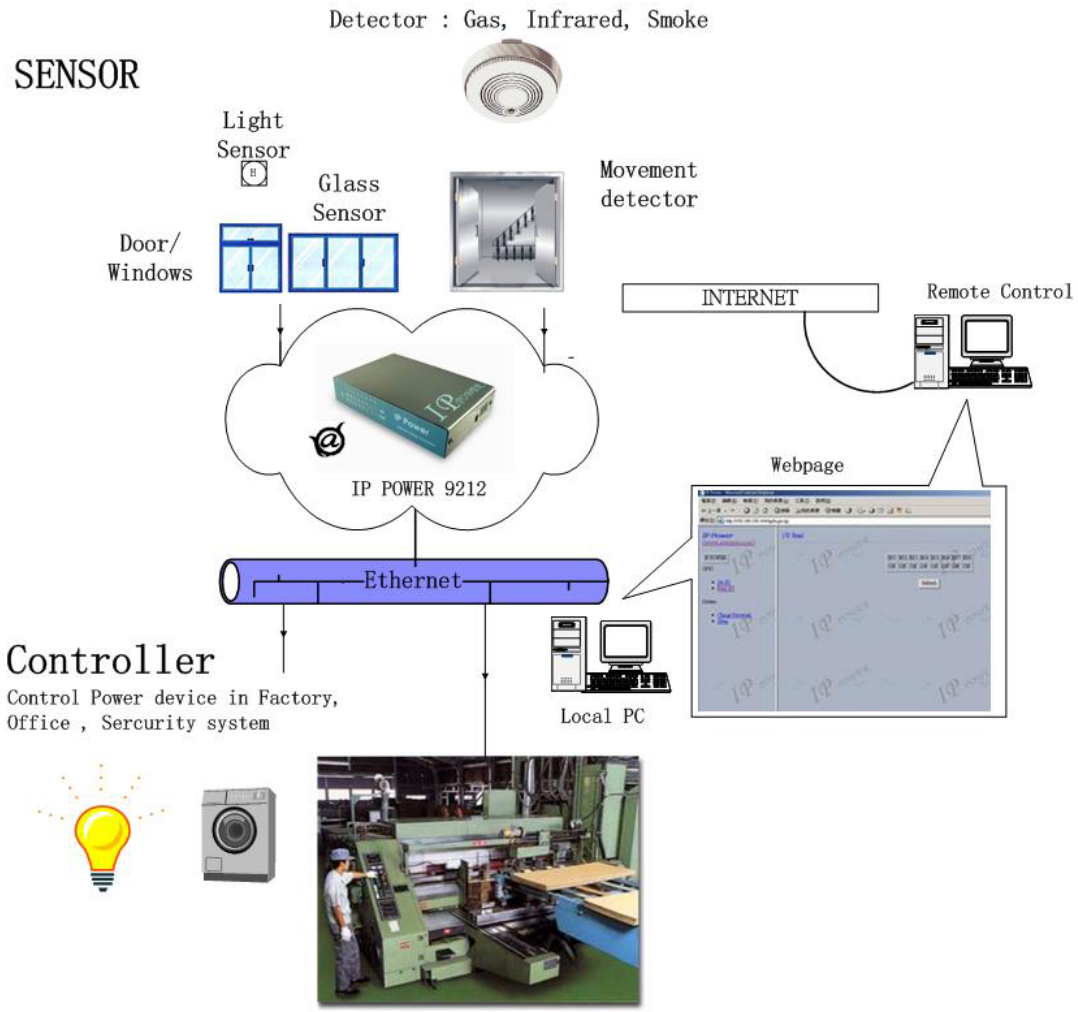

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1. Introduction

The IP Power 9212 is a Network Controller & Sensor with 8 DI & 8 DO. A specific PC or software is not needed; you can easily control devices remotely and check the device status via the Internet anywhere in the world.

Using a Browser such as Internet Explore or Netscape, you can securely access the unit. It includes 8 Digital Inputs, 8 Digital Relay Outputs and works like an IO Server. You can integrate it with Home / Office security, Personal entertainment, and Industrial field applications.

The API program is supported to help the integrator to easy program any software to integrate with existing application systems in local computers. The IP Sensor 9120 can be flexibly applied to Home entertainment & industry security & systems with integrated management.

Feature :

1. Embedded web server – no need to connect to a PC – Use Ethernet or Internet (LAN / WAN)
2. Accessible with popular web browsers- IE (Internet Explore) or Netscape – DO NOT need specific S/W.
3. **Comes with 8DI & 8DO: Direct control relay output (DO) and detects digital input (DI)**
   8 Set Sensor – Default 4 Set Source mode (Voltage Input) and
   4 Set Sink mode (Resistance Input).
   8 Set Controllers – Default 4 Set NO - Normal Open & 4 Sets NC - Normal Close
4. Network protocols supported: HTTP, TCP/IP, DHCP, Virtual and Dynamic IP.
5. Security code identification and Hardware reset function.
6. Easy installation, setup and support with online upgrade.
7. Individual LED indicates switch-working status.
8. Safe, durable, non-electric leakage and anti-farmable design.
9. Polar protection – will even connect contrary port .
10. Digital inputs provide de-bouncing function.
11. Update firmware by the TCP/IP network.
12. SDK (Software Development Kits) provided.
13. Compatible with OUR IP Kamera 9000, IP Video 9100 and IP Power 9201E(IP Sensor) for monitoring, control, and detection via any online PC.

Specification: 1. DC 5V (AC90-240 input) 2. D-SUB In & Out port. 3. RJ45

Application field: can be associated with any kind of electrical equipments, no matter household appliances or security equipment. It can manage the power supply through the web page; make it be safer for the security equipment and more convenience for digital control at the far end.

Industrial application field: bank, financial security system, jewels, casino, cash register in supermarket, park, traffic control, military equipment and airport.

2. Before you start

9212 package contents

- *One set of IP POWER 9212*

Main Board : 9200

Sensor board :9201 Pro

Control Board : 9202

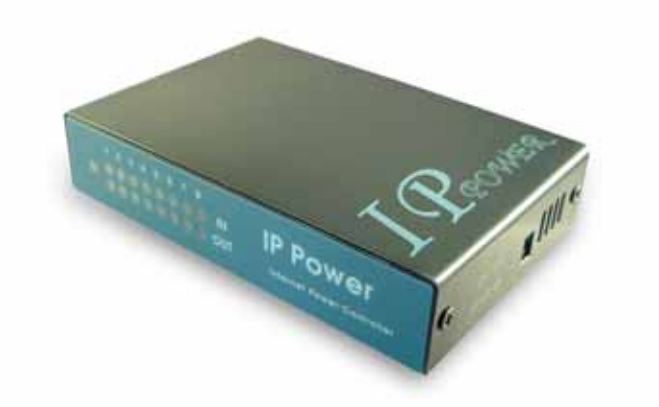
- One network wire with RJ45 port
- One 1A, 110~220V adaptor
- One D-Sub 15 Pin cable
- One install disc
- One rapid install manual

Minimum System Requirements

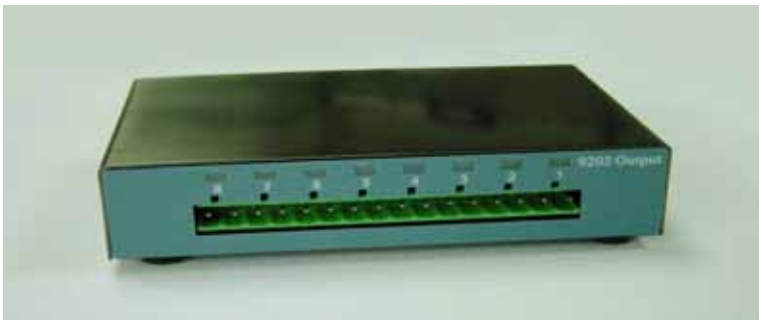
- Minimum Intel Pentium II 300MHz/compatible AMD processor
- WINDOWS operating system (IE5.0+SP1)
- Minimum 64MB RAM
- VGA Card: with capability of displaying full-Colors and DirectDraw support
- Network card with RJ45 port
- Ethernet Hub / Router
- Internet network (Ethernet, xDSL or other ways, depends on whether you need far end control ability or not)

3. Interface Description

IP Power 9212 has three devices , 9200 is the network module, and the followed picture shows its interface:



9202 is the output module and figure below shows its interface:



9202 is the output module and figure below shows its interface:

4. Hardware & Software installation

Before you star to use IP Power 9212, please follow the steps below:

- Check the package to make sure the contents is complete.
- Prepare one Ethernet HUB, or Router
- Check the voltage of the power supply to make sure it is AC 110-240 volt

Hardware Installation

1 Connect the 9200 to HUB through netting twine.

2 Connect the 9200 (IN) to 9201 & 9200 (OUT) to 9202 through D-SUB cable.
Please connect 9200 D-SUB IN to 9200 IN port
& 9200 D-SUB OUT to 9202 OUT port

3 Connect the HUB to the Internet (May through ADSL/XDSL modem).

4 Connect the power adapter to the 9200.

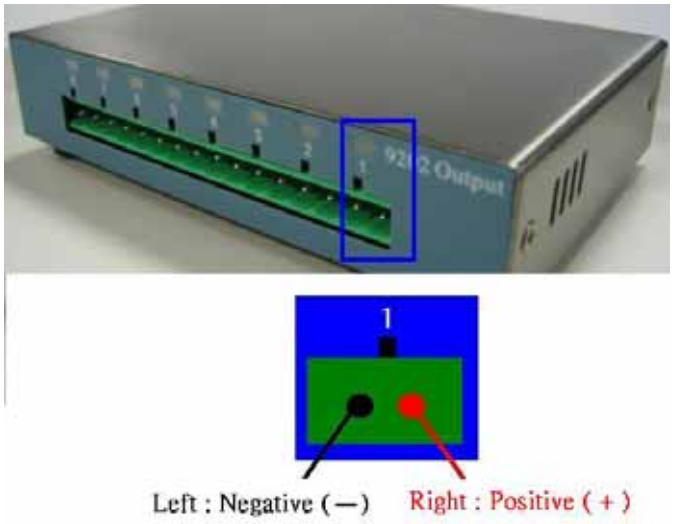
Power on your computer and power adapter of IP POWER 9212.

9201Pro Hardware connection (recommend):

For different request of normal state of electric equipment, 9201 offers four sets of voltage signal IN1-IN4 and four sets of shortcut circuit signals IN5-IN8.

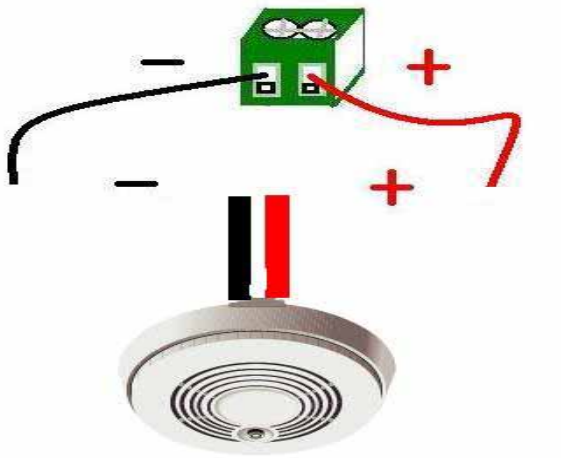
9201 Pro provide 4set Source mode - Voltage Input – Out 1 ~ Out 4
ON : 4V~24V
OFF : 0V ~ 3V
4 set Sink mode - Resistance input – Out 5 ~ Out 8.
ON : 200 ohm~ 0 ohm
OFF : 500 ohm ~ ∞

1. **The polarity: Right - Positive & Left – Negative .**



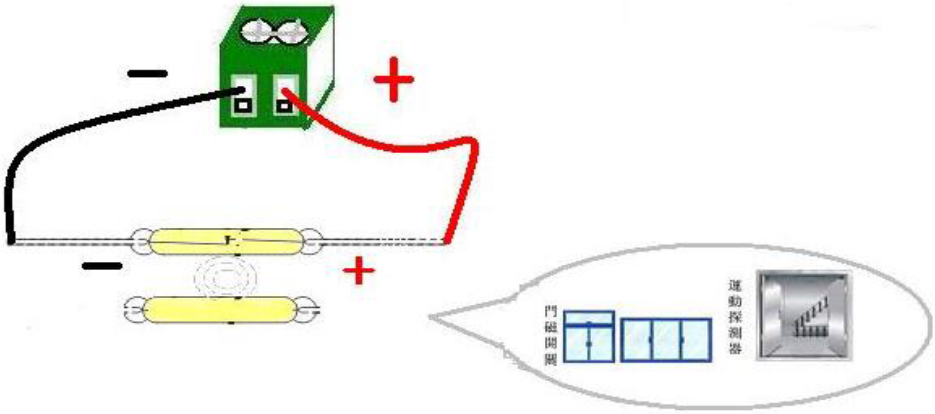
NOTE: Because of the polarity protective function, it won't damage the product if you reverse the polarity in installation. But it will cause the product cannot work properly

2. Source mode (Voltage signal) -- IN1 & IN4: can be connected to voltage signal detectors such as smoke detector, light detector and gas detector.

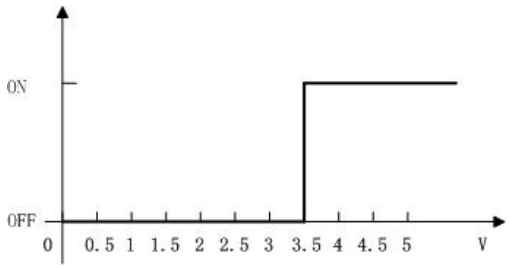


3. Sink mode (Resistance signal) —IN5 & IN8: can be connected to magnetic reed switch as the follow figures

It can be installed in the entrance guard or security equipment such as doors, windows, drawers



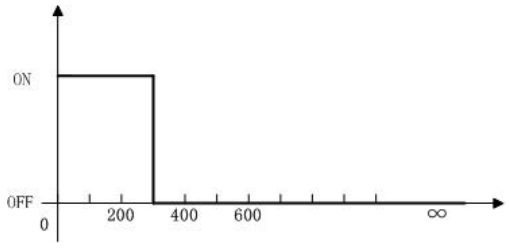
Source mode (Voltage input) :
IN1-IN4 contacts are active signal sensor. If the voltage difference between the two contacts in one set within 0V~3V, 9212 shows ON. It the voltage difference within 4V~24V, 9212 shows OFF. So user can detect the change of equipment. Such as smoke detector, light detector and gas detector.



NOTE:
1. The data in this figure is the average measure value. To ensure the correct detection, we suggest user set the voltage lower than 3V when it shows OFF and higher than 4V when it shows ON
2. The maximum measure voltage is 24V.

.

Slink mode (Resistance Input) :
IN5-IN8 contacts are short circuit sensor. If the resistance between the two contacts in one set within 0Ω~200Ω, 9212 shows ON. If the resistance within 500Ω~∞, 9212 shows OFF. So user can detect the movement of equipment through the magnetic reed switch or other kind of reactive sensors.



NOTE:
1. The data in this figure is the average measure value. To ensure the correct detection, we suggest user set the voltage lower than 200Ω when it shows ON and higher than 500Ω when it shows OFF.
2. When measure the resistance of web contacts, the maximum voltage is 5V and the maximum currency is no more than 10mA。

PS: magnetic reed switch: using the magnetic field of the magnet to produce a signal when there is a movement happened in switch. Low cost and easy to use is the chief characteristic of magnetic reed switch. Most of them are used in security equipment, living product and automatic mechanism.

9202 Pro Hardware connection (recommend)

IP Power 9202 Pro offers 4 sets of NC(Normal Close) – Out 1— Out 4
4 sets of NO (Normal Open) –Out 5— Out 8.

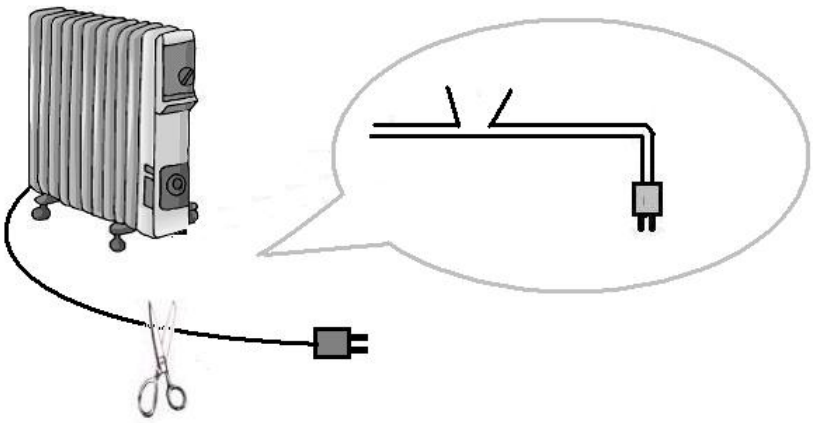
Maximum Rated Voltage: 240V/AC, 60V/DC
Maximum Rated Currency: 12A AC/DC
Maximum Switch time: Max 10ms
Environment Temperature: -30°C~ + 55°C

NOTICE: Only the professionals should operate the following operations in this section and the common user DO NOT try it!

For example--heater

1 Use the electrical wire of the equipment：

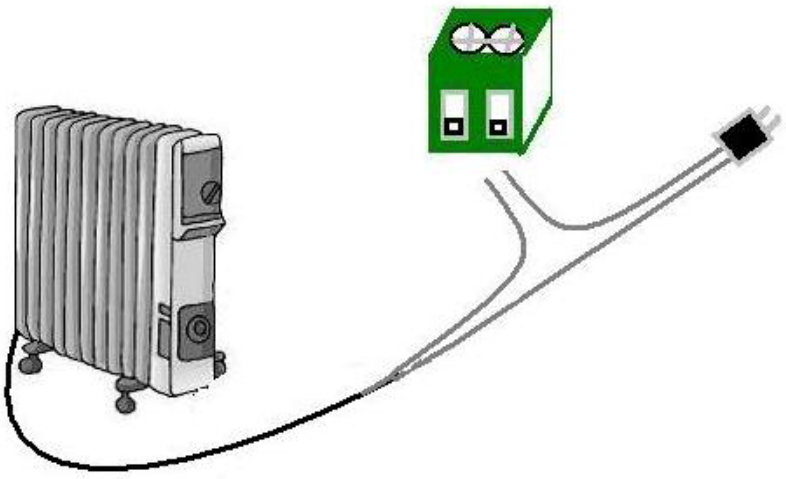
Step 1 ： Cut off the live wire.（Use a test pencil or screwdriver with voltage tester to identify the **live wire** between the two wires of electrical wire.）



NOTICE: this method must cut off the electrical wire of the household appliance. Please make the decision after reading method 5-2 and 5-3.

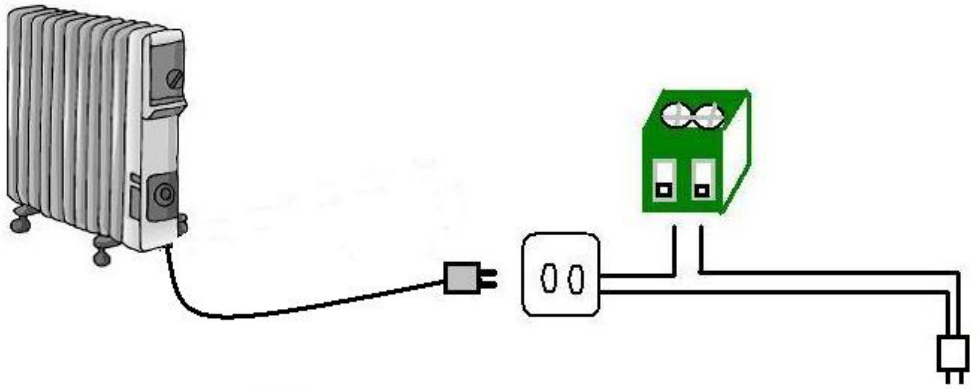
Step 2: Use a test pencil or screwdriver with voltage tester to identify the **live wire** between the two wires of electrical wire. Cut off the live wire and connect to the port of IP Power 9212. **Use the test pencil or screwdriver with voltage tester again to make sure the connection is correct**.

NOTICE: BE CAREFUL IN THIS OPERATION AND DO NOT TOUCH THE WIRE UNDER VOLTAGE WITH ANY PART OF YOUR BODY, ESPECIALLY WITH YOUR HANDS



2. **Use additional electrical wire:** you can buy some electrical wire and outlet in the electrical shop to cooperate with IP Power 9212, avoid cutting off the electrical wire of the equipment and can be used flexible in all kind of electrical equipment.

NOTICE: Use a test pencil or screwdriver with voltage tester to identify the live wire between the two wires of electrical wire and make sure of connecting the live wire to the port of IP Power 9212.



NOTICE: Do not connect too much energy intensive electrical equipment such as air conditioner, electrical heater, microwave over or over in the same electrical outlet. Too much electrical currency may cause fire. This product not guaranties the possible damage because of too much electrical currency.

Software installation

Having connected the power supply and network cable with RJ45 port to the 9200, please install the software as the follow steps:

1. Start your computer, put the install disc in the CDROM, and then find the file named ipeditv3.exe in the install disc.
2. Copy the file to desktop or any directory you want save to.
3. Start the initial setting process following the construction in next section.

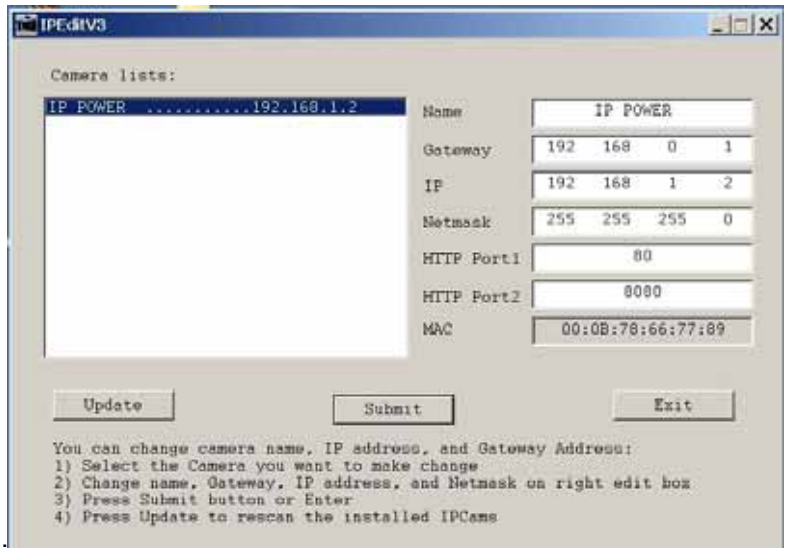
NOTICE: IP Power 9202 needs not any driver of application software; its entire operation interface is built in its hardware. Ipedit3.exe can find the virtual IP address for you.

5. Initial Settings

Initial settings through the Ethernet

1. Double click the EditV3.exe

2. All the IP 92XX series, IP Kamera 9000 series/ IP Video 9100 series in the same subnet of the Ethernet will be found and be display in the window by the software. The default name of IP Sensor 9212 is **IP POWER**.



3. Click the equipment's name that you want to edit in the left of the window; it will turn fuscous, the equipment's name and ip will display in the windows, you can rename (use numbers and letters). After that, click the update button and the new setting will be work in 20 seconds.

4. Double click the name of the equipment you want to control, the IE browser window will open and connected to this equipment in that Ethernet automatically. You also can type the IP address of the 9201E in the IE browser to open the web page of 9000. We suggest you to update the IE to version 6.0 with SP1 or above if your IE notices you the security level is too low to open that web page.

NOTICE:

1. Make sure the RJ45 network wire have been connected correctly and the 9212 are power on.
2. It can obtain the virtual IP address after you run the ipedit.exe only if the Ethernet support DHCP. Click the IP address to enter the web page. If the Ethernet not support DHCP, IP92XX will change it's IP address to fixed IP address: 192.168.0.100. Please follow the steps below to change the subnet of your PC:

Use Windows XP to for example: Click My network neighborhood---->right click---->property---->local network---->right click---->property ---->TCP/IP---->property, like the figure:

The IP address of your computer should in the same subnet with that of IP Power 9212's, so that you can open the web page of 9200. In the figure above, the IP address of IP Power 9212 is 192.168.0.2, so your computer needs to gain an IP address looks like 192.168.0.XXX to get connection to IP Power 9212.

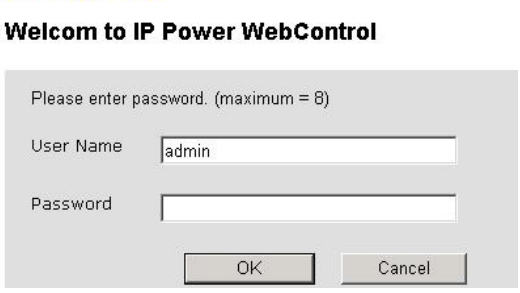
The default fixed IP address is 192.168.0.xxx（xxx can be any number from 1~254, not including 0 or 255）. After that, you can enter the web page using ipedit.exe or simply type 192.168.0.100 in the address column of IE browser.

3. The default username and password of IP Power 9212 are:
   Username: admin
   Password: 12345678

4. Please refer software - Infinity Cam to use IP Power , IP Sensor , IP Kamera & IP Video in one video screen.

6. Control and settings through the Internet

Type the new IP address of IP Power 9212 in the address field and you can enter the login web page. Input the default password 12345678(you can change the password as you wish), click the **OK** and then you can enter the Web Control page.

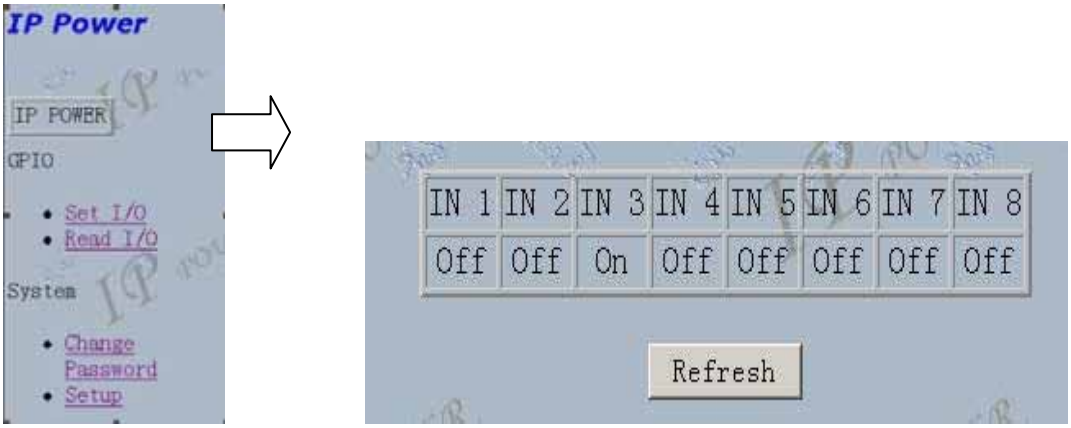


Sensor of IP Power 9212

Source mode (Voltage input) :
IN1-IN4 contacts are active signal sensor. If the voltage difference between the two contacts in one set within 0V~3V, 9212 shows ON. It the voltage difference within 4V~24V, 9212 shows OFF. So user can detect the change of equipment. Such as smoke detector, light detector and gas detector.

Sink mode (Resistance Input) :
IN5-IN8 contacts are short circuit sensor. If the resistance between the two contacts in one set within 0Ω~200Ω, 9212 shows ON. If the resistance within 500Ω~∞, 9212 shows OFF. So user can detect the movement of equipment through the magnetic reed switch or other kind of reactive sensors.

NOTE:
1. The data in this figure is the average measure value. To ensure the correct detection, we suggest user set the voltage lower than 200Ω when it shows ON and higher than 500Ω when it shows OFF.
2. When measure the resistance of web contacts, the maximum voltage is 5V and the maximum currency is no more than 10mA。



Click the **refresh** button and you will see the similar figure like this. It represents the state of the four sets of input signals (there may be some delay, it up to your network).
You also can press the check button in the PCB of 9201, click the **refresh** button in the web page at the same time and then observe whether the input signal state shows **ON** in the web page.

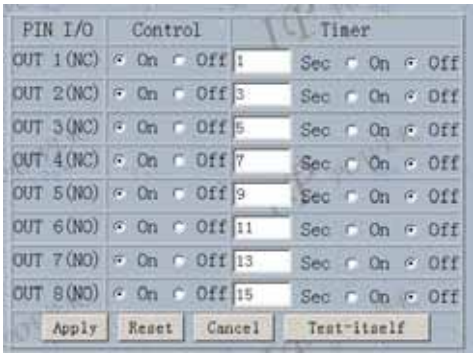
Control of IP Power 9212

IP Power 9212 now can control 8 outputs at the same time.

Out1 & Out4 are normal close switches. When it is **on**, the corresponding LED lights up, the circuit between the two connects is turnoff. When it is **off**, the corresponding LED light off, the circuit between the two connects is turn on.

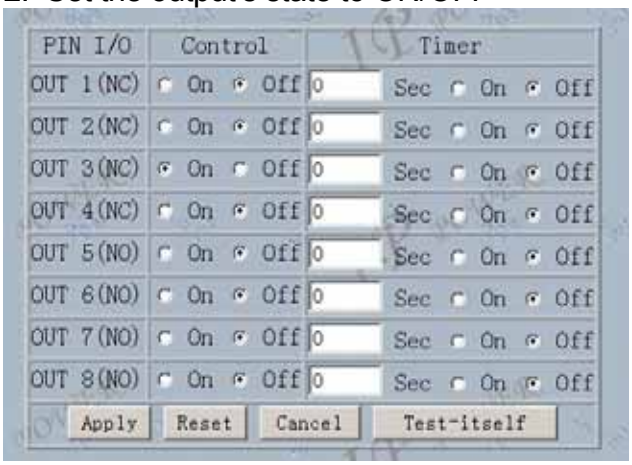
Out5 & Out8 are normal open switches. When it is **on**, the corresponding LED lights up, the circuit between the two connects is turn on. When it is **off**, the corresponding LED light off, the circuit between the two connects is turn off.

1. Auto test function


PIN I/O
Control
Timer
OUT 1(NC) On Off 1 Sec On Off
OUT 2(NC) On Off 3 Sec On Off
OUT 3(NC) On Off 5 Sec On Off
OUT 4(NC) On Off 7 Sec On Off
OUT 5(NO) On Off 9 Sec On Off
OUT 6(NO) On Off 11 Sec On Off
OUT 7(NO) On Off 13 Sec On Off
OUT 8(NO) On Off 15 Sec On Off
Apply
Reset
Cancel
Test-itself

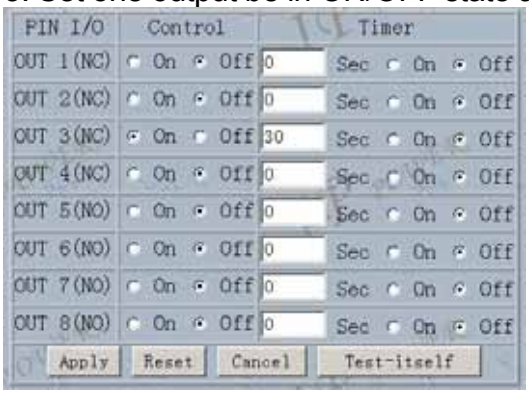
Click the **test-itself** button and you will see the figure above. The states of OUT1, OUT2, OUT3 and OUT4 will separately keep in ON for 1 second, 3 seconds, 6 seconds and 8 seconds, then all back to OFF. After one period, four outputs will keep in OFF state for the same time. This process will repeat until you click the **reset** or **cancel** button.

2. Set the output's state to ON/OFF


PIN I/O
Control
Timer
OUT 1(NC) On Off 0 Sec On Off
OUT 2(NC) On Off 0 Sec On Off
OUT 3(NC) On Off 0 Sec On Off
OUT 4(NC) On Off 0 Sec On Off
OUT 5(NO) On Off 0 Sec On Off
OUT 6(NO) On Off 0 Sec On Off
OUT 7(NO) On Off 0 Sec On Off
OUT 8(NO) On Off 0 Sec On Off
Apply
Reset
Cancel
Test-itself

Click the **output** you want to change, set it to ON or OFF state and click apply button to finish the setting.

3. Set one output be in ON/OFF state at the appointed time


PIN I/O
Control
Timer
OUT 1(NC) On Off 0 Sec On Off
OUT 2(NC) On Off 0 Sec On Off
OUT 3(NC) On Off 30 Sec On Off
OUT 4(NC) On Off 0 Sec On Off
OUT 5(NO) On Off 0 Sec On Off
OUT 6(NO) On Off 0 Sec On Off
OUT 7(NO) On Off 0 Sec On Off
OUT 8(NO) On Off 0 Sec On Off
Apply
Reset
Cancel
Test-itself

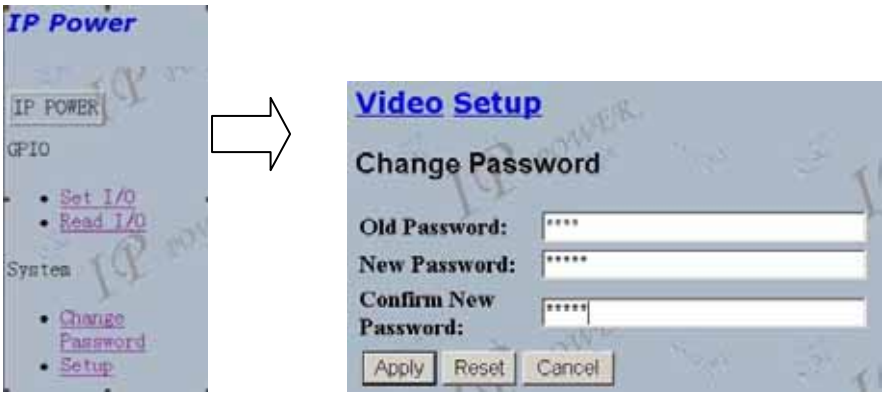
You can set the state when one output starts, either ON or OFF. You can also set the delay time and the action when the delay time is up. Then click **apply** button to confirm it.
The example shows in the figure above means the OUT3 will be in ON state when it starts and will changes the state to OFF after 30 seconds.

4. Reset the ON/OFF settings

Click the **reset** button you can cancel the previously output settings.

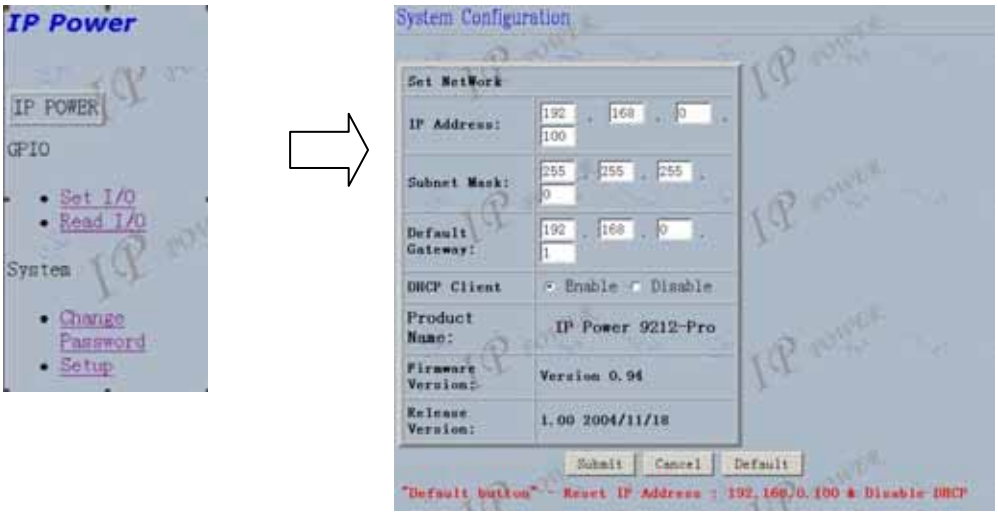
Setting the password for IP Power 9202

Click the **change password** option at the left window and you can enter the change password page. Follow the instructions, fill in the old password and new password, then click the **apply** button to confirm.



Setting the IP address for IP Power 9202

1. Setting a fixed IP address for IP Power 9202.
Click the **setup** option in the left side of the window and you can enter the setting web page. Then follow the instructions fill in the new IP address, mask, and gateway for IP Sensor 9201, forbidden the DHCP service, click the **submit** button to confirm.

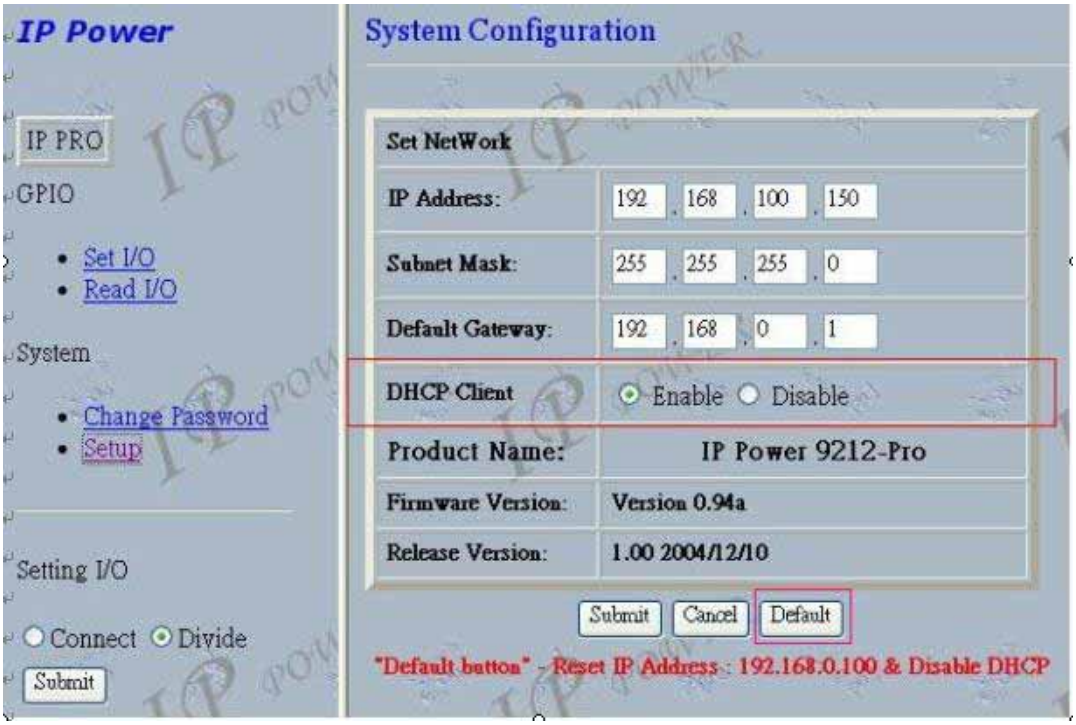


Software online update :

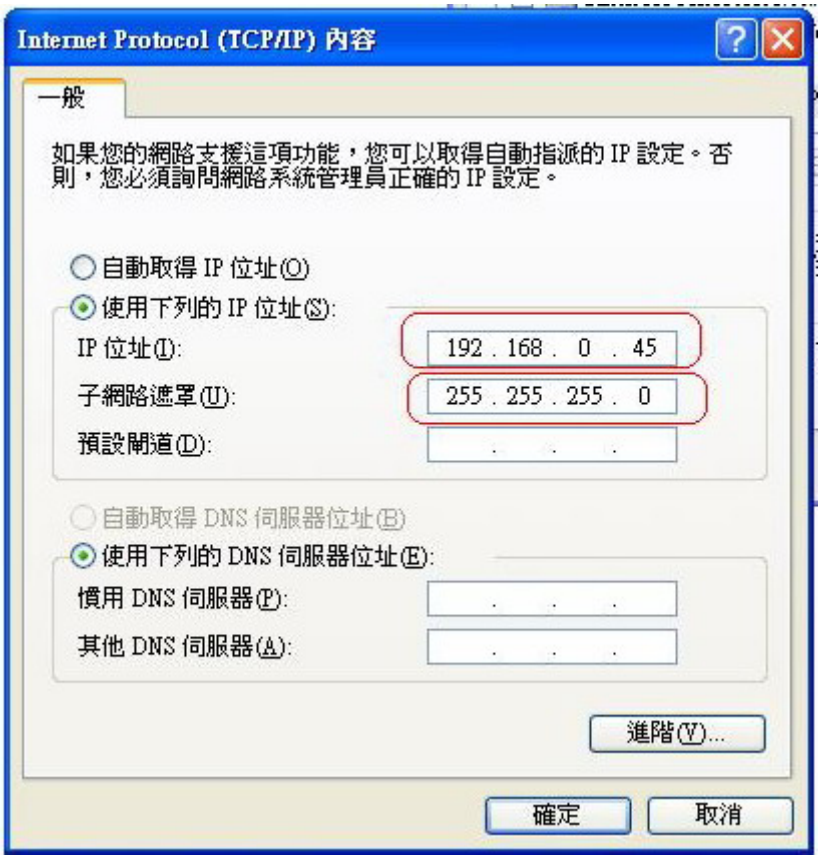
For wild application in different filed , IP POWER 9212 support online update .It safe time and money as developing your product .

Step 1 Choose set up in 9212

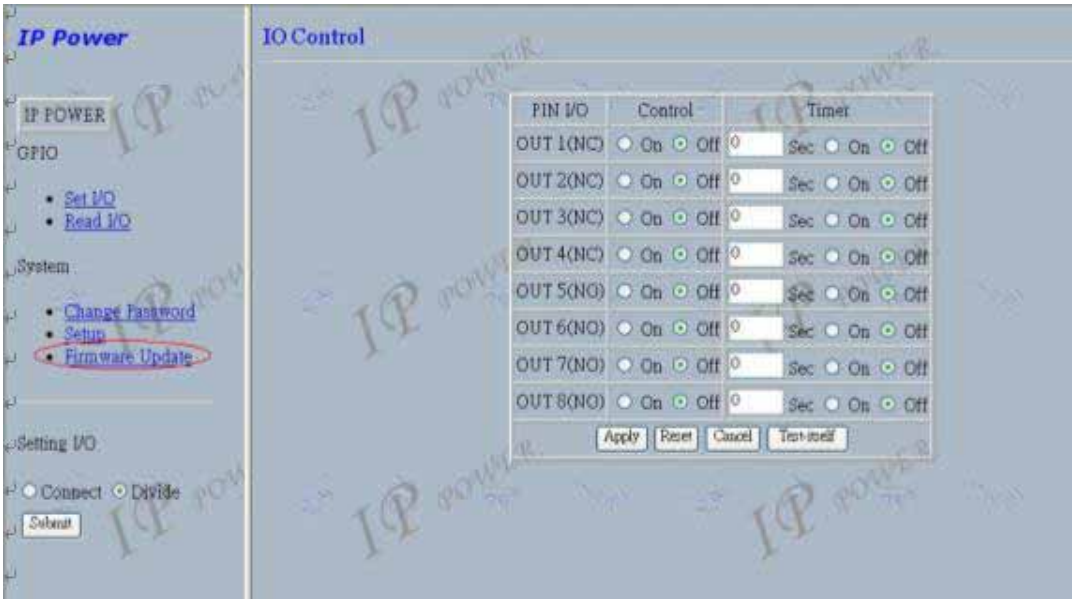
Step 2 Choose Default to set back the default IP setting 192.168.0.100 and disable DHCP.



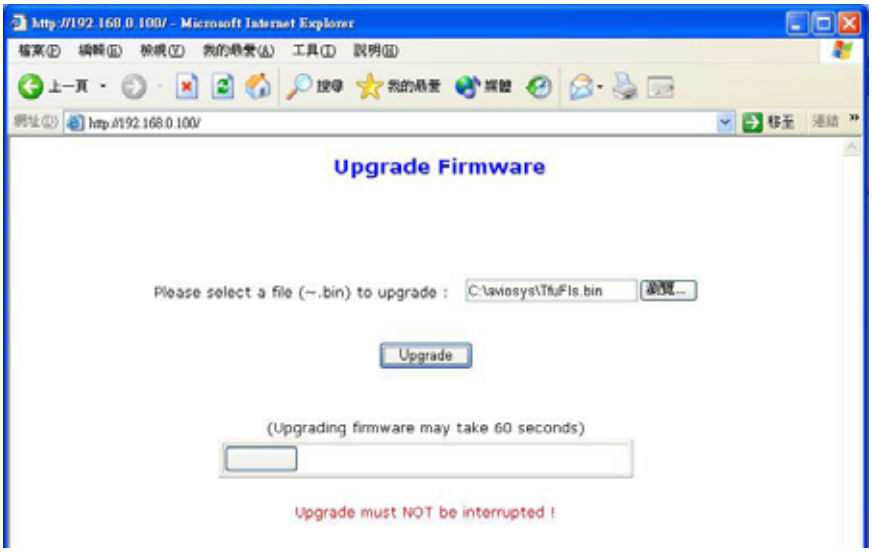
Step 3 Press Reset in 9200 device to detect IP
Step 4 Setting same segment for PC and 9212 .



Step 5 Re - connect and type 192.168.0.100 in IE.
Step 6 Choose Firmware Update



Step 7 Click browser to use latest Firmware then click **Upgrade to update** Firmware

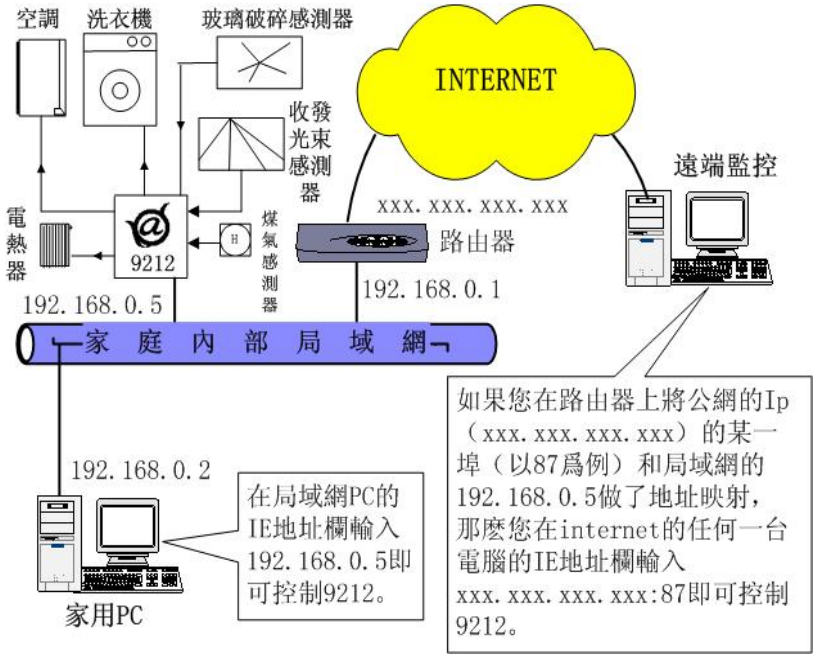

Upgrade Firmware
Please select a file (~.bin) to upgrade :
Upgrade
(Upgrading firmware may take 60 seconds)
Upgrade must NOT be interrupted !

Step 8 after finish update please wait some second and then re-log In

ps : If use DHCp please enable DHCP

7. Setting the 9212 through the Internet

After you have setting the Ethernet and router, you can access the IP Sensor 9212 from the Internet. It will bring you all kinds of convenience. After assigning them different IP address and mapping to each port of the router, you can visit each equipment through the Internet network.



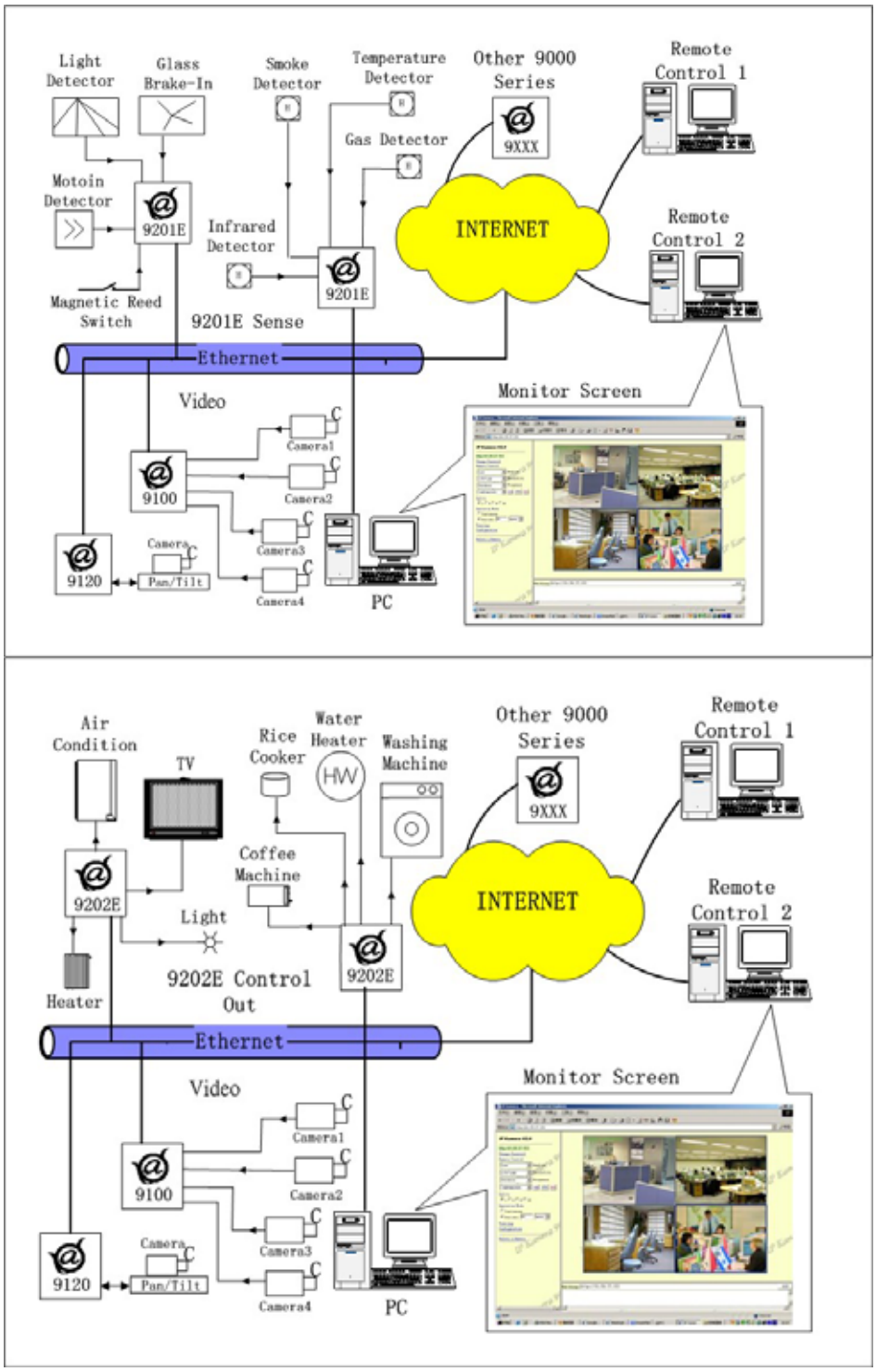
空調： Air conditioner
洗衣機：Washing machine
電熱器： Heater
燈光：Light
路由器： Router
遠端監控： Monitor at the far end
家庭內部局域網： Ethernet
收發光束感測器： Light Detector
玻璃破碎感測器： Glass Brake-In
運動探測器： Movement Detector
煤氣探測器：Gas Detector
路由器：Router

在區域網pc的IE位址欄輸入192.168.0.3即可控制9202E：You can control the 9202E by typing 192.168.0.3 in the address bar of IE in any PC in the Ethernet

如果您在路由器上……即可控制9202E：If you have mapped one port (for example, 85) of the public network IP XXX.XXX.XXX.XXX to the IP 192.168.0.3 in the Ethernet, you can control the 9202E by typing 192.168.0.3 in the address bar of IE browser in any PC connected to the Internet network.

8. Associated with other IP network product

You can associate the IP Power 9212 with other IP network product of OUR in your home Ethernet, such as IP Kamera 9000 network camera, IP Video 9100 network video server and IP Sensor 9201, IP POWER 9202E to monitor the equipments or sensors installed in the doors or windows. This is an economic solution to achieve the network monitor, detection and control.



9. FAQ

Q1: I forgot the password and can not enter the administration page now, what can I do?
A1: Turn on the power normally, and then click the ipedit.exe program to enter the web page. Type in the username “superuser” and password “12345678” and then press the reset button in 9200; it will back to the default settings. Now you can enter the administration page.

Q2: I cannot open the IE web page, why?
A2: Please update your IE or use the up-to-date version of Netscape browser.

Q3: Why the on/off operation can work immediately?
A3: if you operate the IP Sensor 9201 in Ethernet, the operation will work immediately. If you operate it through the Internet, the response speed depends on the situation of the network. Normally the delay is not obvious because the date need to be transported during operating the IP Sensor 9201 is very little.